CLAIMS

1. A stent delivery system comprising:

a catheter;

a balloon operably attached to the catheter; and

a stent disposed on the balloon, the stent including at least one coating, the coating applied onto the stent by dipping a portion of the stent into a coating liquid while simultaneously rotating the stent.

2. The system of claim 1 wherein the coating includes a therapeutic agent.

3. The system of claim 1 wherein the coating is substantially on an outer surface of the stent.

4. The system of claim 1 wherein the coating comprises a thickness of about 1 to 150 microns.

5. The system of claim 1 wherein the stent is dipped at a rate of about 0.1 to 25.0 millimeters per second.

6. The system of claim 1 wherein the stent is dipped for a time period of about 5 seconds to 10 minutes.

7. The system of claim 1 wherein the stent is rotated at a rate of about 100 to 25,000 rotations per minute.

8. The system of claim 1 further comprising:

a control sequence; and

a programmable logic chip wherein the logic chip controls at least one of the dipping and rotation of the stent based on the control sequence.

9. A stent device comprising:

a body; and

at least one coating rotationally applied to a portion of the body, while the body is at least partially immersed in a coating liquid.

10. The device of claim 9 wherein the coating includes a therapeutic agent.

11. The device of claim 9 wherein the coating is substantially on an outer surface of the body.

12. The device of claim 9 wherein the coating comprises a thickness of about 1 to 150 microns.

13. The device of claim 9 wherein the rotational application of the coating comprises dipping the body at a rate of about 0.1 to 25.0 millimeters per second.

14. The device of claim 9 wherein the rotational application of the coating comprises immersing the body for a time period of about 5 seconds to 10 minutes.

15. The device of claim 9 wherein the body is rotated at a rate of about 100 to 25,000 rotations per minute.

16. The device of claim 9 further comprising:

a control sequence; and

a programmable logic chip wherein the logic chip controls the rotational application based on the control sequence.

17. A method for coating a stent comprising:

immersing a portion of the stent into a coating liquid;

withdrawing the immersed portion of the stent from the coating liquid; and

simultaneously rotating the stent with respect to the coating liquid while the stent is being immersed and withdrawn.

18. The method of claim 17 wherein the rotation forces the coating liquid to an outer portion of the stent.

19. The method of claim 17 further comprising applying multiple layered coatings.

20. The method of claim 17 wherein immersing the stent comprises controlling a stent wetting characteristic.

21. The method of claim 17 wherein the stent is immersed at a rate of about 0.1 to 25.0 millimeters per second.

22. The method of claim 17 wherein the stent is immersed for a time period of about 5 seconds to 10 minutes.

23. The method of claim 17 wherein the stent is rotated during immersion at a rate of about 100 to 3,500 rotations per minute.

24. The method of claim 17 wherein withdrawing the stent comprises controlling a stent coating thickness.

25. The method of claim 24 wherein the sent coating thickness comprises a thickness of about 1 to 150 microns.

26. The method of claim 17 wherein the stent is withdrawn at a rate of about 0.1 to 25.0 millimeters per second.

27. The method of claim 17 wherein the stent is rotated during withdrawal at a rate of about 600 to 25,000 rotations per minute.

28. The method of claim 17 further comprising:

programming a control sequence; and

controlling at least one of the immersion, withdrawal, and rotation based on the control sequence.

29. A stent device comprising:

means for immersing a portion of the stent into a coating liquid;

means for withdrawing the immersed portion of the stent from the coating liquid; and

means for simultaneously rotating the stent with respect to the coating liquid while the stent is being immersed and withdrawn.

30. The device of claim 29 further comprising:

a control sequence; and

means for controlling at least one of the immersion, withdrawal, and rotation based on the control sequence.